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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,489	04/12/2004	Harold Robert Schnetzka	20712-0092	3035
65885	7590	11/09/2007		
MCNEES WALLACE & NURICK LLC 100 PINE ST. P.O. BOX 1166 HARRISBURG, PA 17108-1166			EXAMINER IP, SHIK LUEN PAUL	
			ART UNIT 2837	PAPER NUMBER
			MAIL DATE 11/09/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

51

Office Action Summary	Application No.		Applicant(s)	
	10/822,489		SCHNETZKA ET AL.	
	Examiner		Art Unit	
	/Paul Ip/		2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7/16/04&10/31/05</u> . | 6) <input type="checkbox"/> Other: ____. |

Art Unit: 2837

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 7/16/2004 and 10/31/2005 complies with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-3, 9-10, 12-15, 19-20, 26-27, and 29-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Rahman et al (2004/0160201 filed on 2/14/2003).

Rahman et al show in figures 1-2 a plurality of inverters electrically connected in parallel to a DC link stage(206, 208). Rahman et al show in figures 1-6 that the controllers 224 and 264 generate CLK signals to the inverters. Rahman et al disclose at paragraph [0006] a method for reducing the power bus ripples of a multiple inverter system. Rahman et al further disclose at paragraph [0035] the RMS ripple current for the center based interleaved scheme and the leading and lagging edge coincident scheme to reduce RMS ripple current at the DC link stage.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

Art Unit: 2837

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 4-8, 11, 16-18, 21-25, 28, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rahman et al (2004/0160201 filed on 2/14/2003) in view of Mokrytzki et al (3,781,615) or Maurio et al (6,118,932) or Duba et al (6,101,109).

The claims further recite inputting a carrier signal, inputting a modulating signal, and phase shift. However, the patents to Mokrytzki et al, Maurio et al, and Duba et al disclose plural inverters ripple current control comprising a carrier signal and phase shift. Prima facie case is made that Rahman et al disclose lead and lag signal modulation. It is known that the lead and lag signal modulation is the other term of phase shift and carrier signal. Since Rahman et al, Mokrytzki et al, Maurio et al, and Duba et al are plural inverters control systems for controlling the ripple current use for the same environment to reduce ripple current, it would have been obvious to one of ordinary skill in the art to provide Rahman et al with the carrier signal and phase shift technique as taught or suggested by Mokrytzki et al, Maurio et al, or Duba et al. It is inherent to have a phase shift in 30 degree, 60 degree, or 90 degree the way as recited in the claims.

Citation of Pertinent References

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents or publications cited on form 892 are inverter control

Art Unit: 2837

systems for controlling the ripple current of the inverters by using phase shift and carrier signal.

Communication Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Paul Ip/ whose telephone number is (571)-272-1941. The examiner can normally be reached on Monday to Friday from 6:30 am to 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan, can be reached on (571)-272-1988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

10. Internet correspondence **MUST** be provided with a prior written authorization by applicant in the application file record giving the Office authorization to communicate with applicant via e-mail. Without a written authorization by applicant in place, the USPTO will not respond via Internet e-mail to any Internet correspondence which contains information subject to the confidentiality requirement as set forth in 35 U.S.C. 122.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 2837

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Paul Ip". The signature is fluid and cursive, with the first name "Paul" and the last name "Ip" clearly distinguishable.

/Paul Ip/
Primary Examiner
Art Unit 2837

11/5/2007